

## ABSTRACT

An apparatus for separating solid particles from the suction effluent of, for example, a dental office, preferably driven by a dental office vacuum pump, includes a surge tank for accommodating effluent overfill connected to a sedimentary deposit tank for sedimentation of effluent particles. A bypass conduit is connected to the surge tank inlet which is equipped with a vacuum break valve for allowing air into the system when the suction openings are closed. The sedimentary deposit tank has a series of baffle chambers through which effluent flows in sequence, and in each of which chambers sediment is deposited for later removal. The surge tank preferably has a liquid level sensor and warning device. Modular filters or adsorbants may be installed in the sedimentary deposit tank, or a modular auxiliary filter may be connected downstream of the tank. Chemical injection may be used to improve sedimentation. A positive air pressure source or auxiliary pumps may be used to drive the effluent, particularly in large installations incorporating multiple surge and deposit tanks. Full tank effluent removal and drying facilities are optionally provided.